AMENDMENTS TO THE CLAIMS

This listing will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A [[M]]method for controlling the reaction temperature in a catalytic bed ~~(24)~~ of a reactor ~~(1)~~ in which a chemical reaction takes place in pseudo-isothermal conditions by means of at least one heat exchanger ~~(12)~~, crossed by a respective operating fluid[[,]] immersed in said catalytic bed ~~(24)~~, ~~which method is characterized in that it comprises~~ comprising the step of:

setting the ~~speed~~ velocity of said heat exchange fluid inside the respective heat exchanger ~~(12)~~ within predetermined values, so that the heat ~~exchange~~ transfer coefficient inside said heat exchanger ~~(12)~~ is less than the heat ~~exchange~~ transfer coefficient in the catalytic bed ~~(24)~~.

2. (Currently amended) The [[M]]method according to claim 1, ~~characterized in that~~ wherein said ~~speed~~ velocity of said heat exchange fluid inside the respective heat exchanger is regulated within values such that the heat ~~exchange~~ transfer coefficient inside the heat exchangers ~~(12)~~ is equal to or less than 2/3 the heat ~~exchange~~ transfer coefficient inside the catalytic bed ~~(24)~~.

3. (Currently amended) The [[M]]method according to claim 1, ~~characterized in that~~ wherein said reactor ~~(1)~~ comprises at least two heat exchangers ~~(12)~~ immersed in the catalytic bed ~~(24)~~ and ~~in that it~~ wherein the method further comprises the steps of:

continuously detecting in said catalytic bed the temperature difference ΔT between the temperature of the catalytic bed at said heat exchangers and a limit temperature T_1, at a middle point between said heat exchangers; and

varying the ~~speed~~ velocity of said heat exchange fluid inside said heat exchangers, according to the aforementioned temperature difference ΔT, obtaining a corresponding variation of the heat ~~exchange~~ transfer coefficient inside said heat exchangers.

4. (Currently amended) A [[P]]pseudo-isothermal chemical reactor comprising:

a catalytic bed; ~~(24) and~~

at least two heat exchangers ~~(12)~~ immersed in said catalytic bed; and ~~(24), characterized in that it comprises~~

an apparatus ~~(20)~~ for adjusting the temperature inside a reaction zone ~~(15)~~ of said catalytic bed defined between said heat exchangers ~~(12)~~, comprising

a probe ~~(23)~~ for continuously measuring the temperature difference ΔT between the temperature in a central position of said zone ~~(15)~~ and the temperature of said reaction zone ~~(15)~~ at said heat exchangers ~~(12)~~,

a control unit ~~(21)~~, in data communication with said probe ~~(23)~~, and

a feeding ~~speed~~ velocity regulator ~~(22) of~~ for an operating fluid (F_o) in said heat exchangers ~~(12)~~, in data communication with said control unit ~~(21)~~.